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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/803,978	03/13/2001	Shinichi Takeda	837.1964/JDH	9367

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EXAMINER
HUGHES, DEANDRA M

ART UNIT	PAPER NUMBER
3663	

DATE MAILED: 06/30/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/803,978	TAKEDA ET AL.	
	Examiner	Art Unit	
	Deandra M Hughes	3663	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *12 June 2003* .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,2,7-10,13 and 17-31* is/are pending in the application.

4a) Of the above claim(s) *11,12,14 and 15* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,2,7-10,13 and 17-31* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other:

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-2, 7-8, 10, 13, 16-20, and 23-31 are rejected under 35 U.S.C. 102(e) as being anticipated by Hansen (US 6,323,993 filed Feb. 19, 1999).

**Please note that the references made herein are done so for the convenience of the applicant and are in no way intended to be limiting. The reference should be considered its entirety.

With regard to claims 1 and 17-20, Hansen discloses:

- shaping a waveform of an input signal light (signal power level is the amplitude of the signal – see abstract; if the amplitude is changed, so is the waveform) to produce a shaped output signal light
- selecting a quality measure that obtains a quality measurement of said output signal light from a
 - o Q factor (col. 3, last line)
 - o A bit error rate (fig. 6, BER)
 - o A spectrum shape (inset of fig. 6)

- A eye opening (inset of fig. 6)

The optimal level for this system is disclosed, e.g. see col. 6, lines 23-26. However, please note the 112-1st paragraph rejection regarding the use of the phrase 'optimal level'.

With regard to claims 2 and 27, gain flattening of the optical amplifier is disclosed (col. 5, lines 60-67).

With regard to claims 10, 13, and 28-31 the amplitude control (input power) is a means of waveform shaping.

With regard to claims 7-8, the quality selection module is the optical spectrum analyzer (fig. 5, #435).

With regard to claim 16, the signal is a WDM signal (col. 2, line 45).

The method claims are merely the normal operations of the disclosed apparatus.

Claim Rejections - 35 USC § 103

3. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

4. Claims 9 and 21-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ransford (US 6,532,087 filed May 6, 1999) in view of Fee (US 6,317,232 filed Mar. 25, 1998). Ransford discloses:

- an amplifier (20) that amplifies a first signal (OPTICAL SIGNAL) to produce a second signal (signal input to 10)
- an attenuator (10) that attenuates the second signal to produce a third signal (signal leaving attenuator 10)

- a quality monitor (65 and 70) that measures the quality of the third signal
- a controller that controls the attenuator (via 65) to change a power level of the second signal and thereby optimize the quality of the third signal.

Ransford does not specifically disclose an optical regenerator for shaping the waveform of the third signal to produce a fourth signal. However, Fee teaches the use of optical regenerators to reshape the pulse and remove timing jitter (col. 1, lines 40-50). It would have been obvious to one of ordinary skill in the art at the time the invention was made to use a regenerator to reshape the pulse for the advantage of obtaining a more accurate signal quality measurement.

Claim Rejections - 35 USC § 112

5. The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

6. Claims 1-2, 7-10, 13, and 16-31 rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

In applicant's arguments filed 6/12/03, the applicant notes the definitions of 'optimization' and 'optimal'. Again, phrases such as 'perfect, effective or functional as possible' are context dependent. Tolerable noise levels vary from application to application. A noise level that may be considered 'optimal' in one system may be not be

considered tolerable in another system. Consequently, disclosure of the 'optimal level' is required.

Response to Arguments

7. Applicant's arguments with respect to claim 6/12/03 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Deandra M Hughes whose telephone number is 703-306-4175. The examiner can normally be reached on M-F, 8:30am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas G Black can be reached on 703-305-9707. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9326 for regular communications and 703-872-9327 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-1113.

DMH
June 23, 2003

THOMAS G. BLACK
SUPERVISORY PATENT EXAMINER
GROUP 3600